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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
AMINZAY, SHAIMA Q	

ART UNIT	PAPER NUMBER
2684	

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4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/040,422	STRASSER ET AL.	
	Examiner	Art Unit	
	Shaima Q. Aminzay	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 20-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 20-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

1. This is the second Action, application filed on 6/7/2002.

2. Independent Claim 1, 9, 11, 13, 20, 26 and dependent claims 2-8, 10, 12, 14-15, 21-25, 27-30 are pending in the case.

3. The present title of the application is "Dynamically Variable User Operable Input Device"

NON-FINAL ACTION

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) Patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 4, 9, 10, 26, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selig et al. U. S. Patent Number 6492978, and in view of Schadow U. S. Patent 3867596, and further in view of Kono U. S. Patent 6,229,694.

1. Regarding claim 1, 4, 9, 10, 26, and 29, Selig teaches a processor-based system and method (Figure 1, and column 3, lines 8-11) comprising: a display (Figure 1, element 10); a user operable element (Figures 1, and 3, elements 14

and 24) positioned over the display to enable viewing of the display through the element (see for example, column 3, lines 54-59, and column 4, lines 35-50), and the user-operable element is a push button (see for example column 4, lines 21-24, 37-39, 43-46), and a switch operatively coupled to the operable element (see for example, column 4, lines 35-50), and switch mechanically connected to the operable element and electrically coupled to the processor (see for example, column 4, lines 51-65, the switch 24 mechanically connected to the element 16).

However, Selig does not teach the operable element having a non-monotonic response to user actuation; and a switch operatively coupled to the operable element, and transparent part on the user-operable element that allows a portion of the display to be viewed through said element.

Schadow teaches a user operable element having a non-monotonic characteristics (see for example, column 1, lines 23-35; force excreted on the button verses the travel of the button in not linearly proportion (non-linearity makes it non-monotonic)).

Kono teaches the transparent part on the user-operable element (see for example, input key 3, Figure 1) allows a portion of the display to be viewed through said element (see for example, Figures 1, 10, and column 5, lines 65-67, and column 8, lines 43-48).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Kono's processor-based display system (column 3, lines 59-64) with Schadow's rubber-like push button switch with Selig's

processor-based system with display and keyscreen (Figure 1, and 2, element 16) to "provided tactical feedback in a touchscreen for matching the benefits of a mechanical keyboard" (Selig, column 2, lines 22-24) with an improved push button switch that the push button only has to move a small distance on actuation (Schadow, column 3, lines 57-64).

2. Regarding claim 30, Selig, Schadow, and Kono teach claims 1, and further, Selig teaches a user-operable element for installation over a display includes providing an element for installation over a touch screen display (see for example, Figure 4, column 6, lines 11-19).

3. Claims 11, 12, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selig et al. U. S. Patent Number 6492978, and in view of Schadow U. S. Patent 3867596.

4. Regarding claims 11, 12, and 13, Selig teaches a processor-based system (Figure 1, and column 3, lines 8-11) comprising: a touch screen display (Figure 1, element 10); a user operable element positioned over the display to enable viewing of the display through the element (see for example, Figure 1, shows the element positioned over the display (10), and further in Figure 3, the transparent element 16; column 3, lines 41-43, and lines 52-53), and a contactor operatively coupled to the operable element such that actuation of said element causes contact with the touch screen display (see for example, column 4, lines 43-46, column 5, lines 5-6), and a resilient element connected to the operable element

such that operation of the operable element is resisted with a force (see for example, column 4, lines 13-19, column 4, lines 1-5, and lines 37-39), and the user-operable element is a push button (Column 4, lines 21-24).

However, Selig does not teach the operable element having a non-monotonic response to user actuation

Schadow teaches a user operable element having a non-monotonic characteristics (see for example, column 1, lines 23-35; force excreted on the button verses the travel of the button in not linearly proportion (non-linearity makes it non-monotonic)).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Schadow's rubber-like push button switch with Selig's processor-based system with display and keyscreen (Figure 1, and 2, element 16) to "provided tactical feedback in a touchscreen for matching the benefits of a mechanical keyboard" (Selig, column 2, lines 22-24) with an improved push button switch "that the push button only has to move a small distance on actuation" (Schadow, column 3, lines 57-64).

5. Regarding claim 15, Selig and Schadow teach claim 13, and further Selig teaches the resilient element is a coil spring which breaks out of column in response to compressive force (see for example, column 8, lines 47-50).

6. Claims 2, 3, 20, 21, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selig et al. U. S. Patent Number 6492978, and in view of Carroll et al. U. S. Patent Number 6057966.

7. Regarding claims 20, and 23, Selig teaches a processor-based system (Figure 1, and column 3, lines 8-11) comprising: a display (Figure 1, element 10), and a switch operatively coupled to said operable element (see for example, column 4, lines 35-50), and the user-operable element is a push button (see for example column 4, lines 21-24, 37-39, 43-46).

However, Selig does not teach the user-operable element having a light pipe positioned over said display to enable viewing of the display through the light pipe,

Carroll teaches a user-operable element having a light pipe positioned over said display to enable viewing of the display through the light pipe (see for example, column 1, lines 26-29, lines 65-67, and column 2, lines 1-4, column 14, lines 35-41, and 44-49).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Carroll's computer-based system with display viewable through the light pipe (column 3, lines 35-41) with Selig's processor-based system with display and keyscreen (Figure 1, and 2, element 16) to provide a processor-based system display system with light pipe that draw significantly lower power and generates lower thermal output (Carroll, column 1, lines 50-57).

8. Regarding claims 2, 3, 21, and 22, Selig, Schadow, and Carroll teach claims 1, 20, and further, Selig teaches a the display is a cathode ray tube (see for example, Figure 1, column 3, lines 22-26), and the display is a liquid crystal display (see for example, Figure 1, column 3, lines 22-26).

9. Regarding claims 4, and 23, Selig, Schadow, and Carroll teach claims 1, 20, and further, Selig teaches the user-operable element is a push button (Column 4, lines 21-24).

10. Claims 5, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selig et al. U. S. Patent Number 6492978, and in view of Chen et al. U. S. Publication 20020183862.

11. Regarding claims 5, and 24, Selig teaches a processor-based system as recited in claim 1. However, Selig does not teach the user-operable element is a rocker.

Chen teaches the user-operable element is a rocker (seer for example, paragraph [0014], lines 2-5 (switch 26 is a rocker)).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Chen's processor based system with a display rocker switch (see for example, [0011], lines 1-10) with Selig's processor-based system with display and keyscreen (Figure 1, and 2, element 16) to provide a processor-based system with a rocker switch for "better ways to control the display of information on processor-based system (Chen, paragraph [0004], lines

3-5).

12. Claims 6, 7, 8, 25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selig (U. S. Patent Number 6492978), and in view of Schadow U. S. Patent 3867596, and in view of Kono U. S. Patent 6229694, and in view of Chen et al. U. S. Publication 20020183862, and in view of Carroll et al. U. S. Patent Number 6057966, and further in view of Graham (U. S. Patent Number 6351260).

13. Regarding claims 6, and 27 Selig, Schadow, Kono, and Chen teach claims 1, and 26. However, Selig, Schadow, Kono, and Chen do not teach a lens positioned over the display to enable viewing of the display through the lens, and fiber optic bundle.

Graham teaches a lens positioned over the display (see for example column 2, lines 27-28, and 64-66, column 4, lines 39-40; the computer system element or embodiment may include lenses, also it is a common knowledge that positioning a lens over the display, the user will be able to view the display through the lens (it is used for clarity and magnification)).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Graham's optical touch panel with Chen's processor based system with a display and a switch (see for example, [0011], lines 1-10) with Schadow's switch with having non-monotonic characteristics (see for example, column 1, lines 23-35 with Selig's computer based (or processor

based) touch screen over the display (Figure 1, and 2, element 16) to provide processor-based system including lens section with the same operation through enhanced display such "the benefit of using lenses is that the light is collimated such that the light beams can traverse larger screen areas and the fabrication of the waveguide sections is simplified" (Graham, column 7, lines 1-6) and to provide a quality product with significantly lower cost than conventional designs (Graham, column 2, lines 64-66).

14. Regarding claims 7, 8, 25, and 28, Selig, Schadow, Kono, Chen, Carroll, and Graham, teach claims 1, 20, 26, and further, Carroll teaches a light pipe positioned over said display to enable viewing of the display through the light pipe (see for example, column 1, lines 26-29, lines 65-67, and column 2, lines 1-4, column 14, lines 35-41, and 44-49), and fiber optic bundle (see for example, column 1, lines 48-56, "Such an approach is described in U.S. Pat. No. 5,196,836").

15. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Selig et al. U. S. Patent Number 6492978, and in view of Schadow U. S. Patent 3867596, and further in view of Armstrong U. S. Patent Number 6504527 B1.

16. Regarding claim 14, Selig and Schadow teach claim 13. However, Selig and Schadow do not teach the resilient element is a rubber dome.

Armstrong teaches the resilient element is a rubber dome (see for example, column 4, lines 7-11, column 5, lines 8-9, and Abstract, lines 6-9).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Schadow's rubber-like push button switch with Selig's processor-based keyscreen and include Armstrong's resilient dome caps to provide a user operable device having a depressible surface for "creating a varying value according to varying depression applied by a finger of a human user to a depressible surface of the sensor" (Armstrong, Abstract, lines 3-5), and to provide control manipulation on the display at the time the user is pressing the depressible surface (Armstrong, column 1, lines 26-35).

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 703-305-8723. The examiner can normally be reached on 7:00 AM -5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service telephone number is 703-305-3900.

Shaima Q. Aminzay
(Examiner)

April 20, 2004

NAY MAUNG
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